

We claim:

1. An implant for rigidly positioning spinous processes comprising:
  - 5 a first means adapted for engaging a first spinous process;
  - a second means adapted for engaging a second spinous process;
  - a body means adapted for positioning between the first spinous process and the second spinous process;
  - a hub means for engaging the first means, the second means and
  - 10 the body means; and
  - wherein said body means is rotatable, and pivotable relative to the body means.
2. The implant of claim 1 wherein:
  - 15 said body means includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process;
  - said spacer includes a bore which is received over a shaft extending from said hub means; and
  - 20 wherein said bore has an enlarged first end and a smaller second end and wherein said enlarged first end is located adjacent to said body means and smaller end is at a location distally from said body means so that said spacer can pivot about said smaller end relative to said body means.
- 25 3. The implant of claim 2 wherein:  
said spacer is substantially egg-shaped.
4. The implant of claim 2 wherein:
  - 30 the bore of said spacer is off-center.

5. The implant of claim 2 wherein:

said spacer is substantially egg shaped and the bore of said spacer is off-center toward a blunt end of the substantially egg-shaped spacer.

5 6. The implant of claim 1 wherein:

said body means includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and

said spacer is substantially egg-shaped.

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7. The implant of claim 1 wherein:

said body means includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and

15

said spacer has a bore which is received over a shaft extending from said hub means, and said bore of said spacer is off-center.

8. The implant of claim 1 wherein:

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said body means includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and

said spacer is substantially egg-shaped;

25

said spacer has a bore which is received over a shaft extending from said hub means, and said bore of said spacer is off center toward a blunt end of the substantially egg-shaped spacer.

9. The implant of claim 1 wherein:

at least one of said first means and said second means has a lead-in tissue expander adapted to be urged in between spinous processes.

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10. The implant of claim 1 wherein:

at least one of said first means and said second means has a hook that can engage a spinous process.

5 11. The implant of claim 9 wherein:

the tissue expander has a back end with a hook that can engage a spinous process once the tissue expander has been urged into position between spinous processes.

10 12. The implant of claim 1 wherein:

at least one of said first means and said second means has a lead-in portion and a portion rearward of said lead-in portion and a hook positioned adjacent to the rearward portion in order to engage a spinous process once the lead-in portion is urged between the spinous process.

15 13. The implant of claim 1 wherein:

at least one of the first means and the second means is moveable relative to the hub means.

20 14. The implant of claim 1 wherein:

the body means is moveable relative to at least one of the first means and the second means.

15. The implant of claim 1 wherein:

25 at least one of the first means and the second means is translatable and pivotable relative to said hub means.

16. The implant of claim 1 wherein:

30 at least one of said first means and the second means is telescopingly positionable relative to said hub means.

17. An implant for rigidly positioning spinous processes comprising:

a first hook adapted to engage a first spinous process;

a second hook adapted to engage a second spinous process;

5 a body adapted to be positionable between the first spinous process and the second spinous process;

a hub;

said first hook, said second hook and said body operably mounted to said hub; and

10 wherein said body is rotatable, and pivotable relative to the body.

18. The implant of claim 17 wherein:

said body includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process;

15 said spacer includes a bore which is received over a shaft extending from said hub; and

wherein said bore has an enlarged first end and a smaller second end and wherein said enlarged first end is located adjacent to said body and smaller end is at a location distally from said body so that said  
20 spacer can pivot about said smaller end relative to said body.

19. The implant of claim 18 wherein:  
said spacer is substantially egg-shaped.

25 20. The implant of claim 18 wherein:  
the bore of said spacer is off-center.

21. The implant of claim 18 wherein:

said spacer is substantially egg-shaped and the bore of said spacer is off center toward a blunt end of the substantially egg-shaped spacer.

5           22.    The implant of claim 17 wherein:

said body includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and said spacer is substantially egg-shaped.

10           23.    The implant of claim 17 wherein:

said body includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and said spacer has a bore which is received over a shaft extending from said hub, and said bore of said spacer is off center.

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24.    The implant of claim 17 wherein:           said body includes a spacer which is adapted to be positioned between the first spinous process and the second spinous process; and said spacer is substantially egg-shaped;

20           said spacer has a bore which is received over a shaft extending from said hub, and said bore of said spacer is off-center toward a blunt end of the substantially egg-shaped spacer.

25           25.    The implant of claim 17 wherein:

at least one of said first hook and said second hook has a lead-in tissue expander adapted to be urged in between spinous processes.

26.    The implant of claim 25 wherein:

the tissue expander has a back end with a hook element that can engage a spinous process once the tissue expander has been urged into position between spinous processes.

5           27.    The implant of claim 17 wherein:

at least one of said first hook and said second hook has a lead-in portion and a portion rearward of said lead-in portion and a hook element positioned adjacent to the rearward portion in order to engage a spinous process once the lead-in portion is urged between the spinous process.

10           28.    The implant of claim 17 wherein:

at least one of the first hook and the second hook is moveable relative to the hub.

15           29.    The implant of claim 17 wherein:

the body is moveable relative to at least one of the first hook and the second hook.

20           30.    The implant of claim 17 wherein:

at least one of the first means and the second hook is translatable and pivotable relative to said hub.

25           31.    The implant of claim 17 wherein:

at least one of said first hook and the second hook is telescopingly positionable relative to said hub.

32.    In an implant for rigidly positioning spinous processes, the improvement comprising:

an egg shaped spacer positioned between adjacent spinous processes.

33. The implant of claim 32 wherein:

said spacer is mounted on a axis so that said spacer is rotatable and pivotable relative to the axis.

5 34. The implant of claim 32 wherein:

said spacer has a bore which is adapted to receive a shaft, which bore is off center.

35. The implant of claim 34 wherein:

10 said egg shaped spacer has a blunt end and a pointed end and said bore is located closer to the blunt end than said pointed end.

36. The implant of claim 33 wherein:

15 said spacer includes a bore which has a small end and an enlarged end and wherein said spacer is pivotable about said small end.

37. A method for rigidly positioning a first spinous process relative to a second spinous process including the steps in any desired order of:

20 placing a first hook around a first spinous process;  
placing a second hook around a second spinous process;  
using a hub to interlock the first hook relative to the second hook;

rotating and pivoting a spacer in order to place the spacer between  
25 the first spinous process and the second spinous process; and  
connecting the spacer to the hub.

38. The method of claim 37 including using a spacer that is egg shaped and the step of directing a pointed end of the egg shaped spacer

toward the spine with a blunt end of the spacer pointed away from the spine.

5           39.    The method of claim 39 including using a spacer that is egg shaped and has a bore that is located closer to a blunt end of the spacer and farther away from a pointed end of the spacer, and the step of directing the pointed end of the egg shaped spacer toward the spine with the blunt end of the spacer pointed away from the spine.

10           40.    The method of claim 37 including the step of:  
telescoping the position of one of the first hook and the second hook relative to the hub and then locking the position of the one of the first hook and the second hook relative to the hub.

15           41.    The method of claim 37 including the step of adjusting the position of at least one of the spacer, the first hook, the second hook and the hub prior to using the hub to lock in the positions of the first hook and the second hook relative to the hub.

20           42.    The method of claim 37 including the step of implanting the first hook, the second hook, the hub, and the spacer without altering the first spinous process and the second spinous process.

25           43.    The implant of claim 1 wherein said implant does not require the alteration of the spinous processes for implantation relative to the spinous processes.

30           44.    The implant of claim 17 wherein said implant does not require the alteration of the spinous processes for implantation relative to the spinous processes.